

responded quite well and by 1991 we had trees of 2.5-3 m in height. In May 1991, on a full moon evening, I noticed a few flying foxes *Pteropus giganteus* for the first time on the top most branch of an *Acacia auriculaeformis* squabbling and flapping. I wondered what these bats were up to. Coming back next morning to inspect the tree, I noticed some green chunks of residual matter that had been spat out by the bats on the ground. The supple fleshy phyllodes on the top most branch were absent and it was obvious that the bats had fed on them. I decided to observe them again that evening and I noticed more bats had settled on more Acacia trees. There was more squabbling and shrieking as they fed on the phyllodes in a frenzy. Most of them

had settled on the upper branches and apparently they liked the juice of the tender phyllodes. Since then they have been coming every summer in hundreds from March onwards and are surprisingly absent during the winter months. Although now they have almost become pests of these Acacias, destroying most of the tender phyllodes, it is interesting to note a change in the feeding preference of fruit eating bats now relishing the phyllodes of an exotic tree.

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9. MALE, FEMALE BURROW OCCUPANCY PATTERN OF THE SOUTH INDIAN GERBIL *TATERA INDICA CUVIERI*

(With one text figure)

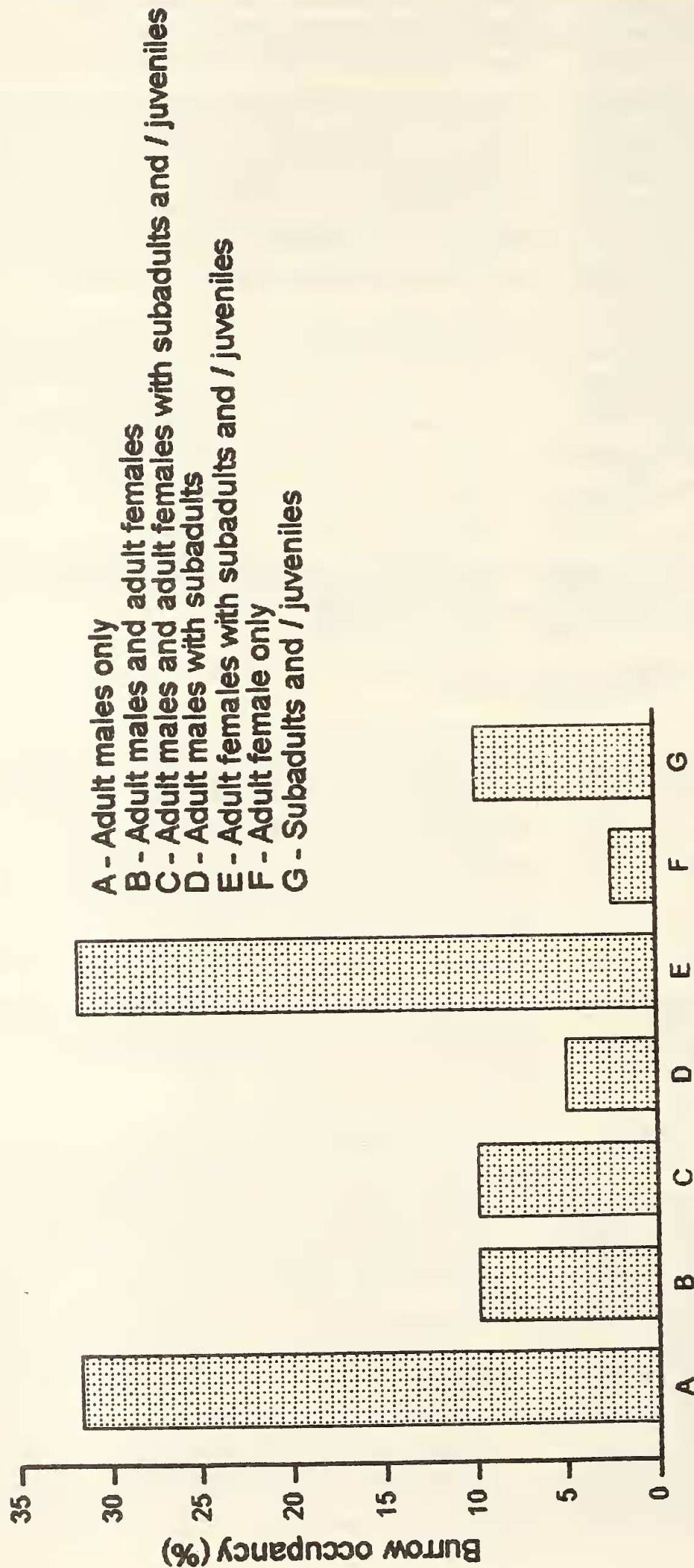
Rodents have evolved several physiological and behavioural mechanisms ensuring maximum reproduction (Davies 1991). They may be colonial, solitary, or sometimes both (Barnett and Prakash 1982); and their burrow habits are usually complicated assuring them better protection (Hanney 1975, Prakash and Mathur 1987). Though tropical rodent species are diverse, and economically important, information regarding their field habits are scarce. Hence the present study on the habitat ethology of South Indian gerbil *Tatera indica cuvieri* was undertaken with regard to their burrow occupancy and social grouping.

Studies were conducted in selected coastal areas of Trivandrum district, where the burrows of *Tatera indica cuvieri* are common. Once a burrow was located, the grass and surface soil around 3 m of the burrow were cleared; and all exits used by the animals to escape were closed. The tunnels were then carefully excavated from the entry point into the interior. A soil plug within the tunnel a few feet from the entrance, and the presence of rat fleas in the fresh soil collected from the floor of the tunnel indicate a

currently inhabited burrow. As all the emergency exits were closed prior to breaking into the burrow, the gerbils tend to move to the distal end of the tunnel, where they group together, enabling a complete capture of all animals of the burrow. Altogether 41 burrows, from which complete collections could be made, were considered for detailed study. Animals collected from each burrow were sexed and counted separately, and were categorized into adults, sub adults and juveniles based on the specific morphological features.

Two types of burrow patterns were observed among *Tatera indica cuvieri*; those inhabited by adult females along with young ones (subadults/juveniles), and those inhabited by adult males. The latter were comparatively smaller, with lesser number of branches and fewer emergency exits. From 41 burrows investigated, a clear diversity of male, female burrow occupancy is discernible, the details of which are shown in Fig. 1.

The male living independently, and the females living with young ones (subadults/juveniles) in separate burrows can be a kind of evolutionary



χ^2 analysis showed significant difference in the burrow occupancy pattern

($\chi^2 = 25.76$, $df = 6$, $P < 0.005$)

As per Z value (test for proportion), group A (males only) and group E (females with subadults and juveniles) significantly differ from the rest ($P < 0.01$)

Fig. 1. Burrow occupancy pattern of *Tatera indica cuvieri*

adaptation, providing better security and maternal care to growing subadults and juveniles. Such a dichotomy in male-female burrow dwelling pattern is quite interesting. In spite of several reports of colonial existence of subterranean rodents, this type of burrow dimorphism with regard to occupancy has not been projected. Since Indian rodents like the short tailed mole rat *Nesokia indica* and gerbil *Tatera indica* Hardwicke also exhibit a kind of colonial existence (Barnett and Prakash 1982), a dimorphism in male and female burrow occupancy among South Indian gerbils is characteristic. It was also noticed that in the majority of the burrows containing young ones, the only adult present was the female (may be their mother). Probably, males avoided such burrows, or were chased away by the females after mating. In several microtine rodents, adult females move away from the colony and seek separate

existence prior to parturition, providing ecological space for their offspring (Lidicker 1975). In any case, the male *T. indica cuvieri* staying away from young ones subscribes to their negligible role in parental care. Such sex-wise separate existence can also indicate the absence of a long term monogamous relationship. In such a set up, the females of *T. indica cuvieri* face the possibility of mating with different males (multiple male matings), as in the case of Mongolian gerbils, *Meriones unguiculatus* (Agren *et al.* 1989), probably to avoid inbreeding.

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10. NEW RECORDS OF THE MALABAR SPINY DORMOUSE (*PLATACANTHOMYS LASIURUS* BLYTH) IN THE INDIRA GANDHI WILDLIFE SANCTUARY, TAMIL NADU

In March 1994, we were conducting night transects in the wet evergreen forests in the Indira Gandhi Wildlife Sanctuary for surveying nocturnal arboreal mammals. On 4th March we were on a night transect along a foot path in the Varagaliar shola, 25 km south of Top Slip at an altitude of 650 m. After spotting and observing a couple of flying squirrels we were on our way back to the camp, when we spotted a Malabar Spiny Dormouse (*Platacanthomys lasiurus*) that had just fallen from a tree right in front of us.

During the last one year of live trapping of terrestrial rodents in rainforests in the Indira Gandhi Wildlife Sanctuary and in some private forests in the area, I trapped a few more individuals of the Malabar Spiny Dormouse. Some were in the Akkamalai hills at an elevation of 1280 m, far above the range of 600-900 m suggested by Ellerman (1961). Shankar (1996) recorded the Spiny Dormouse at an even higher altitude (2000 m) in the Upper Bhavani hills of the Nilgiris. Some other recent reports of the species have been within or close to the altitudinal